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- A motorcycle having a transmission system that accommodates an enlarged rear tire, the motorcycle comprising in combination:
- a. a support frame for supporting a rider, the support frame extending along a longitudinal axis between opposing front and rear ends;
- b. a rear wheel rotatably coupled to the rear end of the support frame, the rear wheel including a rear wheel drive gear for applying torque to the rear wheel, the rear wheel drive gear extending substantially in a first vertical plane spaced apart from the longitudinal axis of the support frame by a first offset distance;
- c. an engine mounted to the support frame for generating a turning force to propel the motorcycle;
- d. a transmission mounted to the support frame and coupled to the engine for selectively coupling the turning force generated by the engine to a transmission output gear, the transmission output gear extending substantially in a second vertical plane spaced apart from the longitudinal axis of the support frame by a second offset distance, the second offset distance being smaller than the first offset distance;
- e. an intermediate shaft rotatably secured to the support frame and disposed generally between the transmission output gear and the rear wheel drive gear, the intermediate shaft including a power input gear, the power input gear extending substantially in said second vertical plane and spaced apart from the longitudinal axis of the support frame by said second offset distance, said intermediate shaft also including a power output gear that rotates together with the power input gear, the power output gear extending substantially in said first vertical plane and spaced apart from the longitudinal axis of the support frame by said first offset distance;
- f. a first drive belt coupling the transmission output gear to the power input gear of the intermediate shaft; and
- g. a second drive belt coupling the power output gear of the intermediate shaft to the rear wheel drive gear.

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- 8. The motorcycle recited by claim 1 wherein the intermediate shaft is located generally within the support frame.
- 9. A motorcycle having a transmission system that accommodates an enlarged rear tire, the motorcycle comprising in combination:
- a. a support frame for supporting a rider, the support frame extending along a longitudinal axis between opposing front and rear ends;
- b. a rear wheel rotatably coupled to the rear end of the support frame, the rear wheel including a rear wheel drive gear for applying torque to the rear wheel, the rear wheel drive gear extending substantially in a first vertical plane spaced apart from the longitudinal axis of the support frame by a first offset distance;
- c. an engine mounted to the support frame for generating a turning force to propel the motorcycle;
- d. a transmission mounted to the support frame and coupled to the engine for selectively coupling the turning force generated by the engine to a transmission output gear, the transmission output gear extending substantially in a second vertical plane spaced apart from the longitudinal axis of the support frame by a second offset distance, the second offset distance being smaller than the first offset distance; and
- e. an intermediate shaft located generally within the support frame and rotatably secured to the support frame, the intermediate shaft including a power input gear, the power input gear extending substantially in said second vertical plane and spaced apart from the longitudinal axis of the support frame by said second offset distance, said intermediate shaft also including a power output gear that rotates together with the power input gear, the power output gear extending substantially in said first vertical plane and spaced apart from the longitudinal axis of the support frame by said first offset distance.

- 10. The motorcycle recited by claim 9 wherein the intermediate shaft is disposed generally between the transmission output gear and the rear wheel drive gear.
- 11. The motorcycle recited by claim 9 wherein the intermediate shaft is disposed generally between the transmission output gear and the rear wheel drive gear, further including:
- f. a first drive belt coupling the transmission output gear to the power input gear of the intermediate shaft; and
- g. a second drive belt coupling the power output gear of the intermediate shaft to the rear wheel drive gear.
- 12. A motorcycle having a transmission system that accommodates an enlarged rear tire, the motorcycle comprising in combination:
- a. a support frame for supporting a rider, the support frame extending along a longitudinal axis between opposing front and rear ends, and wherein the support frame includes a tail frame portion for supporting a rear wheel, the tail frame portion being pivotally secured to the support frame about a tail pivot axis, and the rear wheel being rotatably secured to the tail frame portion;
- b. a rear wheel drive gear for applying torque to the rear wheel, the rear wheel drive gear extending substantially in a first vertical plane spaced apart from the longitudinal axis of the support frame by a first offset distance;
- c. an engine mounted to the support frame for generating a turning force to propel the motorcycle;
- d. a transmission mounted to the support frame and coupled to the engine for selectively coupling the turning force generated by the engine to a transmission output gear, the transmission output gear extending substantially in a second vertical plane spaced apart from the longitudinal axis of the support frame by a second offset distance, the second offset distance being smaller than the first offset distance; and

